

METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR
COMPRESSING A COMPUTER PROGRAM BASED ON A COMPRESSION
CRITERION AND EXECUTING THE COMPRESSED PROGRAM

ABSTRACT OF THE DISCLOSURE

Embodiments of systems, methods, and computer program products are provided for compressing a computer program based on a compression criterion and executing the compressed program. For example, a computer program may be compressed by scanning an initial computer program to identify one or more
5 uncompressed instructions that have a high frequency of use. A storage mechanism, such as a data structure, may then be populated with the identified uncompressed instructions. A compressed computer program may be generated by respectively replacing one or more of the identified uncompressed instructions with a compressed instruction that identifies a location of the corresponding uncompressed instruction in
10 the storage mechanism. Additional compression of the computer program may be achieved by scanning the compressed computer program to identify one or more uncompressed instructions that have a high frequency of use when at least a portion of their instruction operand is ignored. A second storage mechanism, such as a data structure, may then be populated with the identified uncompressed instructions.
15 Finally, a further compressed computer program may be generated by respectively replacing one or more of the identified uncompressed instructions with a second type of compressed instruction that identifies a location of the corresponding uncompressed instruction in the second storage mechanism.